(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
6 March 2003 (06.03.2003)

PCT

(10) International Publication Number
WO 03/019299 A1

(51) International Patent Classification[7]: G03H 1/22, 1/08, G06T 15/00

(21) International Application Number: PCT/IB02/03515

(22) International Filing Date: 8 August 2002 (08.08.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2001/7178 30 August 2001 (30.08.2001) ZA

(71) Applicant and
(72) Inventor: **PHILIPPOU, Dimitri** [ZA/ZA]; H111 Dolphin Beach, Marine Drive, 7441 Bloubergrand (ZA).

(74) Agent: **GERNTHOLTZ, Richard, Otto, Paul**; DR GERNTHOLTZ, P O Box 8, 8000 Cape Town (ZA).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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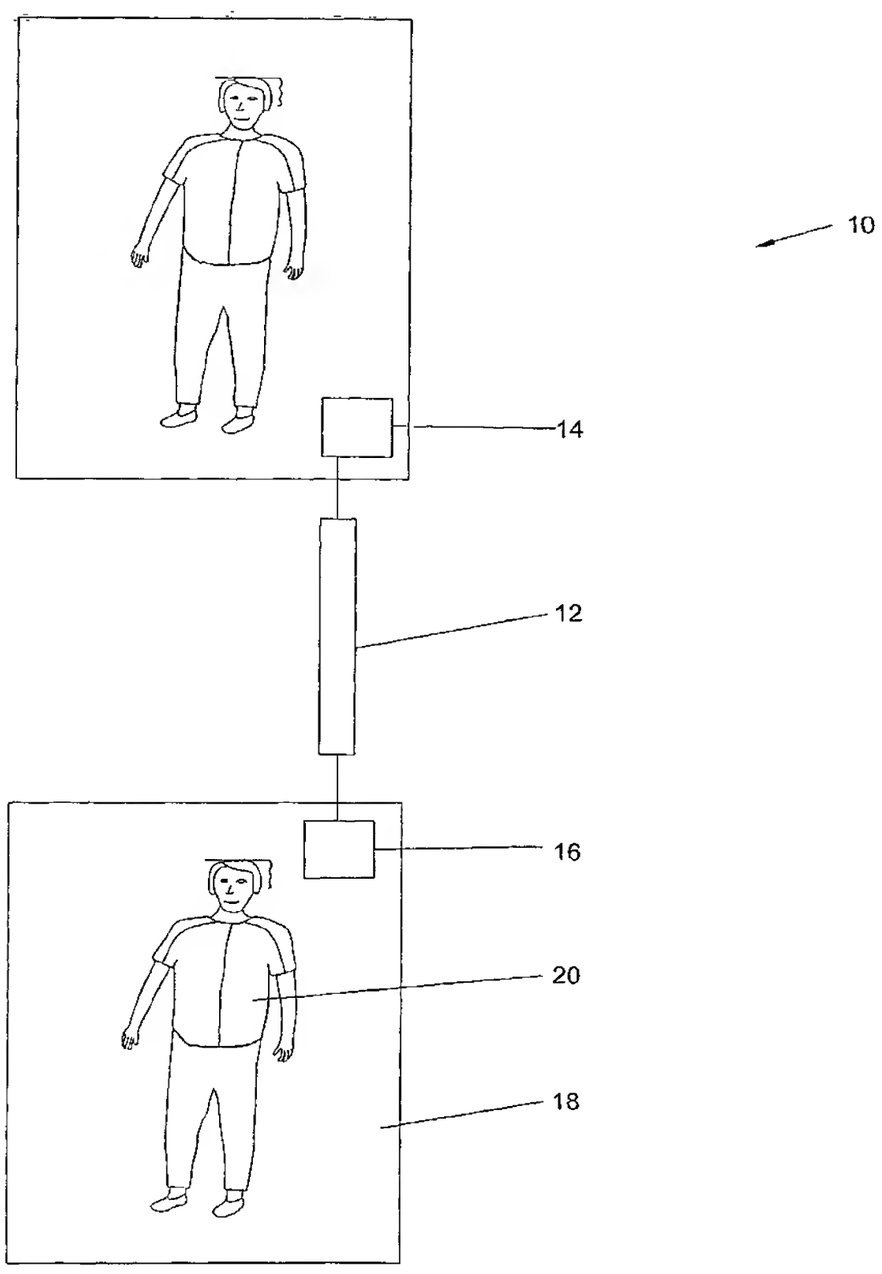
(54) Title: IMAGE PORTRAYAL SYSTEM



(57) Abstract: The invention discloses an image portrayal system, which includes transmission means for transmitting signals, input means for providing signals to be transmitted to the transmission means, and output means for portraying the signals received by it from the transmission means as at least a three-dimensional image. The image may be a hologram or a four-dimensional. The transmission means may include the internet, a local-area network (LAN), a wide-area network (WAN), any other networks, mobile telephone communication, land-line telephone communication, satellite communication, and any other forms of transmission and/or communication.

WO 03/019299 A1

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Image portrayal system.

FIELD OF INVENTION

The present invention relates to image portrayal systems.

More particularly, the present invention relates to image portrayal systems for portraying three-dimensional images.

BACKGROUND TO INVENTION

The developments in the electronic and information technology fields have revolutionised the distribution of information and means of communication. The Internet, e-mails, mobile phones, satellites, pagers, networks and similar communication devices, instruments and systems, have enabled mankind to transmit information at a hitherto unseen rate. However, the aforementioned communication equipment only permits the sending of sound and 2-dimensional images.

It is an object of the invention to suggest an image portrayal system for over-coming the aforementioned problem.

SUMMARY OF INVENTION

According to the invention, an image portrayal system includes

(a) transmission means for transmitting signals;

(b) input means for providing signals to be transmitted to the transmission means; and

(c) output means adapted to receive signals from the transmission means received from the input means and to portray the signals received from the transmission means as a

multidimensional output image being at least a three-dimensional output image.

Also, according to the invention, a method for portraying images, includes the steps

(a) of providing signals to be transmitted to transmission means;

(b) of transmitting the signals transmitted to the transmission means to output means; and

(c) of portraying the signals received by the output means from the transmission means as a multidimensional output image being at least a three-dimensional output image.

The output image may be a four-dimensional image.

The output image may be portrayed in colour.

The output image may consist of matter.

The output image may be portrayed by using nanotechnology.

At least some of the signals may transmit data.

A time delay from transmission of signals by the transmission means and/or receipt by the output means until the output image is portrayed may be included.

A time delay from provision of signals to the transmission means and/or receipt by the output means until the output image is portrayed may be included.

The transmission means may include the Internet, a local-area network (LAN), a wide-area network (WAN), any other networks, mobile telephone

communication, land-line telephone communication, radio communication, satellite communication, radio-waves, micro-waves, and any other forms of transmission and/or communication.

The transmission of the signals may be real-time.

The transmission of the signals may be controlled from the input means and/or from the output means.

The output image may be a hologram.

The output image may be a human figure.

The signals may be provided to the input means in electronic form.

The signals may be directly obtained by the input means from an input image and/or object and/or human.

Sound associated with the output image may be included.

The output image may be adapted to speak.

The system may be utilised for business means, such as advertising, promotions, marketing and selling.

The method may be utilised for business means, such as advertising, promotions, marketing and selling.

The system may be utilised for educational or entertainment means, such as teaching in classes and provision of shows.

The method may be utilised for educational or entertainment means, such as teaching in classes and provision of shows.

The system may be utilised for replacing specific functions performed by humans.

The method may be utilised for replacing specific functions performed by humans.

The transmission means, the input means and/or the output means may be remotely operated.

The remote operation may be via a telephone landline, the internet, or a mobile telephone or other communication.

BRIEF DESCRIPTION OF DRAWING

The invention will now be described by way of example with reference to the accompanying schematic drawing.

In the drawing there is shown a schematic view of an embodiment of an image portrayal system in accordance with the invention.

DETAILED DESCRIPTION OF DRAWING

Referring to the drawing, an embodiment of an image portrayal system, in accordance with the invention and generally indicated by reference numeral 10, is shown.

The image portrayal system 10 includes a transmission means 12, which is the internet in the present embodiment example, input means 14, in this example internet data/signal provider, and output means 16 located at a remote position from the input means 14. The output means 16 is located in this example in a lecture room 18.

In operation, a user located in the lecture room 18 remotely activates the input means 14 which then transmits predetermined signals/data across the transmission means 12 to the output means 16. A three-dimensional image 20 associated with the transmitted signals/data is then displayed in the lecture room 18.

The three-dimensional image may be a hologram, i.e. an image produced by holography which is an imaging technique which records and reconstructs the wave-front emanating from an illuminated object.

By means of the image portrayal system in accordance with the invention, certain functions performed by humans may be replaced with a three-dimensional human image.

LIST OF REFERENCE NUMERALS

10	Image portrayal system
12	Transmission means
14	Input means
16	Output means
18	Lecture room
20	Three-dimensional image

PATENT CLAIMS

1. An image portrayal system, which includes

   (a) transmission means for transmitting signals;

   (b) input means for providing signals to be transmitted to the transmission means; and

   (c) output means adapted to receive signals from the transmission means received from the input means and to portray the signals received from the transmission means as a multidimensional output image being at least a three-dimensional output image.

2. A system as claimed in claim 1, in which the output image is a four-dimensional image.

3. A system as claimed claim 1 or claim 2, in which the output image is portrayed in colour.

4. A system as claimed in any one of the preceding claims, in which the output image consists of matter.

5. A system as claimed in any one of the preceding claims, in which the output image is portrayed by using nanotechnology.

6. A system as claimed in any one of the preceding claims, in which at least some of the signals transmit data.

7. A system as claimed in any one of the preceding claims, which includes a time delay from transmission of signals by the transmission means and/or receipt by the output means until the output image is portrayed.

8. A system as claimed in any one of the preceding claims, which includes a time delay from provision of signals to the transmission means and/or receipt by the output means until the output image is portrayed.

9. A system as claimed in any one of the preceding claims, in which the transmission means includes the Internet, a local-area network (LAN), a wide-area network (WAN), any other networks, mobile telephone communication, land-line telephone communication, radio communication, satellite communication, radio-waves, micro-waves, and any other forms of transmission and/or communication.

10. A system as claimed in any one of the preceding claims, in which the transmission of the signals is real-time.

11. A system as claimed in any one of the preceding claims, in which the transmission of the signals are controlled from the input means and/or from the output means.

12. A system as claimed in any one of the preceding claims, in which the output image is a hologram.

13. A system as claimed in any one of the preceding claims, in which the output image is a human figure.

14. A system as claimed in any one of the preceding claims, in which the signals are provided to the input means in electronic form.

15. A system as claimed in any one of the preceding claims, in which the signals are directly obtained by the input means from an input image and/or object and/or human.

16. A system as claimed in any one of the preceding claims, which includes sound associated with the output image.

17. A system as claimed in any one of the preceding claims, in which the output image is adapted to speak.

18. A system as claimed in any one of the preceding claims, which is utilised for business means, such as advertising, promotions, marketing and selling.

19. A system as claimed in any one of the preceding claims, which is utilised for educational or entertainment means, such as teaching in classes and provision of shows.

20. A system as claimed in any one of the preceding claims, which is utilised for replacing specific functions performed by humans.

21. A system as claimed in any one of the preceding claims, in which the transmission means, the input means and/or the output means are remotely operated.

22. A system as claimed in claim 21, in which the remote operation is via a telephone landline, the internet, or a mobile telephone or other communication.

23. A method for portraying images, which includes the steps

(a) of providing signals to be transmitted to transmission means;

(b) of transmitting the signals transmitted to the transmission means to output means; and

(c) of portraying the signals received by the output means from the transmission means as a multidimensional output image being at least a three-dimensional output image.

24. A method as claimed in claim 23, in which the output image is a four-dimensional image.

25. A method as claimed claim 23 or claim 24, in which the output image is portrayed in colour.

26. A system as claimed in any one of claims 23 to 25, in which the output image consists of matter.

27. A system as claimed in any one of claims 23 to 26, in which the output image is portrayed by using nanotechnology.

28. A system as claimed in any one of claims 23 to 27, in which at least some of the signals transmit data.

29. A method as claimed in any one of claims 23 to 28, which includes a time delay from transmission of signals by the transmission means and/or receipt by the output means until the output image is portrayed.

30. A method as claimed in any one of claims 23 to 29, which includes a time delay from provision of signals to the transmission means and/or receipt by the output means until the output image is portrayed.

31. A method as claimed in any one of claims 23 to 30, in which the transmission means includes the Internet, a local-area network (LAN), a wide-area network (WAN), any other networks, mobile telephone communication, land-line telephone communication, radio communication, satellite communication, radio-waves,

micro-waves, and any other forms of transmission and/or communication.

32. A method as claimed in any one of claims 23 to 31, in which the transmission of the signals is real-time.

33. A method as claimed in any one of claims 23 to 32, in which the transmission of the signals are controlled from the input means and/or from the output means.

34. A method as claimed in any one of claims 23 to 33, in which the output image is a hologram.

35. A method as claimed in any one of claims 23 to 34, in which the output image is a human figure.

36. A method as claimed in any one of claims 23 to 35, in which the signals are provided to the input means in electronic form.

37. A method as claimed in any one of claims 23 to 36, in which the signals are directly obtained by the input means from an input image and/or object and/or human.

38. A method as claimed in any one of claims 23 to 37, which includes sound associated with the output image.

39. A method as claimed in any one of claims 23 to 38, in which the output image is adapted to speak.

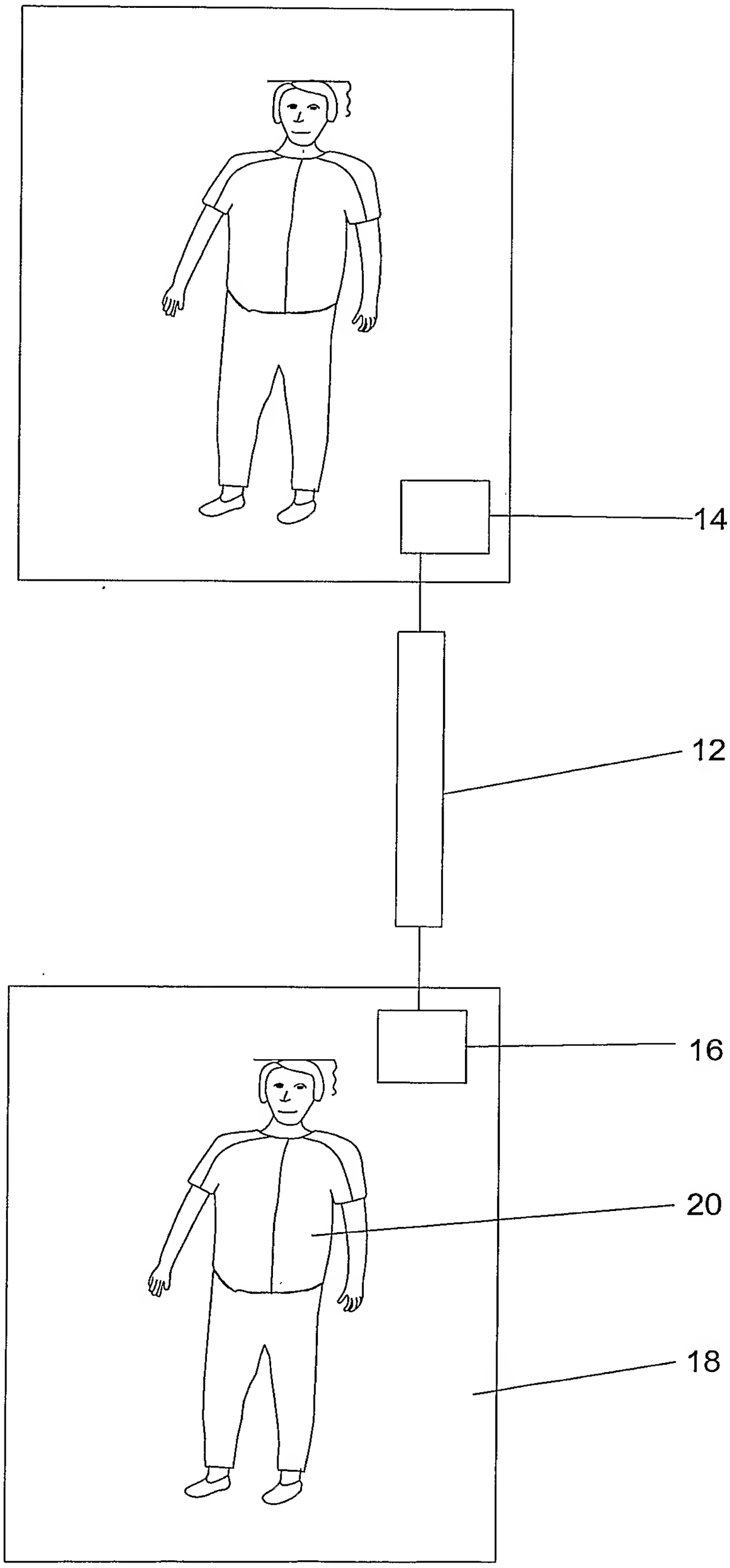
40. A method as claimed in any one of claims 23 to 39, which is utilised for business means, such as advertising, promotions, marketing and selling.

41. A method as claimed in any one of claims 23 to 40, which is utilised for educational or entertainment means, such as teaching in classes and provision of shows.

42. A method as claimed in any one of claims 23 to 41, which is utilised for replacing specific functions performed by humans.

43. A method as claimed in any one of claims 23 to 42, in which the transmission means, the input means and/or the output means are remotely operated.

44. A method as claimed in claim 43, in which the remote operation is via a telephone landline, the internet, or a mobile telephone or other means of communication.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INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB02/03515

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. [7]: G03H 1/22, 1/08, G06T 15/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
WPAT, USPTO keywords: image, hologram, transmit, dimension and similar terms

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6195184 B1 (CHAO et al) 27 February 2001 entire document	1-44
X	US 6009188 A (COHEN et al) 28 December 1999 entire document	1-44
X	US 6246796 B1 (HORIKOSHI et al) 12 June 2001 entire document	1-44

[X] Further documents are listed in the continuation of Box C

[X] See patent family annex

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
12 November 2002	20 NOV 2002
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized officer **Mani Ramachandran** Telephone No : (02) 6283 2233

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB02/03515

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5870220 A (MIGDAL et al) 9 February 1999 entire document	1-44
X	US 5513022 A (SON et al) 30 April 1996 entire document	1-44
Y	US 6009410 A (LeMOLE et al) 28 December 1999 abstract, column 1 lines 40-44	1-44
A	US 4669812 A (HOEBING) 2 June 1987 entire document	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/IB02/03515

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member					
US	6195184	NONE					
US	6009188	US	6023523	US	6028955	US	6222937
US	6246796	EP	881843	JP	11266465		
US	5870220	AU	36523/97	WO	9802764		
US	5513022	NONE					
US	6009410	CA	2250450				
US	4669812	GB	2149934				

END OF ANNEX

DERWENT-ACC-NO: 2003-268457

DERWENT-WEEK: 200481

TITLE: Image portrayal system for the capture, transmission and display of three dimensional image data, for use in mobile telephony

INVENTOR: PHILIPPOU D

PATENT-ASSIGNEE: PHILIPPOU D[PHILI]

PRIORITY-DATA: 2001ZA-007178 (August 30, 2001)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE
WO 03019299 A1	March 6, 2003	EN
AU 2002328192 A1	March 10, 2003	EN
US 20040246334 A1	December 9, 2004	EN

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE S G SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
WO2003019299A1	N/A	2002WO-IB03515	August 8, 2002
AU2002328192A1	N/A	2002AU-328192	August 8, 2002
US20040246334A1	N/A	2002WO-IB03515	August 8, 2002
US20040246334A1	Based on	2004US-488198	March 1, 2004

INT-CL-CURRENT:

TYPE	IPC DATE
CIPS	G03H1/00 20060101

ABSTRACTED-PUB-NO: WO 03019299 A1

BASIC-ABSTRACT:

NOVELTY - The image portrayal system uses a transceiver (12) to transmit the image data from the input device (14) to the output display (16). The image can be holographic or four-dimensional, and can be conditioned for transmission across a number of networks both local and wide-area, as well as mobile telephony devices.

DESCRIPTION - An INDEPENDENT CLAIM is included for a method of capturing, transmitting and displaying image data.

USE - For the capture, transmission and display of three dimensional image data.

ADVANTAGE - The system allows previously impossible three dimensional images to be sent over mobile telephony networks.

DESCRIPTION OF DRAWING(S) - The figure shown is a schematic diagram of the image transmission system in operation.

Transceiver (12)

Input device (14)

Output device (16)

CHOSEN-DRAWING: Dwg.1/1

TITLE-TERMS: IMAGE SYSTEM CAPTURE TRANSMISSION DISPLAY THREE DIMENSION DATA MOBILE TELEPHONE

DERWENT-CLASS: P84 T01 V07 W01 W02

EPI-CODES: T01-H07C3B; T01-J10C4; V07-F02C; W01-B05A1A; W02-F03B9; W02-F08B1;

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: 2003-213293